

REMARKS

This is intended as a full and complete response to the Office Action dated December 24, 2008, having a shortened statutory period for response set to expire on March 24, 2009. Claims 1-5, 8-12, 15-17, 19-25 and 26-30 are pending in the application. Claims 1-5, 8-12, 15-17, 19-21 are rejected under 35 U.S.C. § 103(a) being unpatentable over Hayes (U.S. 2003/0158906) in view of Connery (US 6,246,683) and Allison (US 6,393,457). Claims 26, 28, and 29 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hayes, Connery, and Allison in view of known prior art. Claims 27 and 30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hayes, Connery, and Allison in view of Dunlap (US 6,760,799). These rejections are respectfully traversed.

By way of this reply, Applicants are cancelling claims 3, 10, and 17, amending claims 1, 9, 11, 16, 27, and 30, and adding new claims 31-33. Applicants respectfully request reconsideration and allowance of all claims in view of the following remarks.

As amended, claims 1, 9, and 16 each recite limitations of receiving user buffer descriptors that specify the locations of user buffers configured to store processed frame data for delegated TCP connections and indicating in a field of a user buffer descriptor how many of the user buffers are accepted by an offload unit before the processed frame data is stored in one of the user buffers. These limitations are supported by Figure 8D and paragraphs [0062] and [0071] of the application as originally filed. Specifically, a user buffer descriptor flag can include a bit requesting that the offload unit issue a notification command when payload data is uploaded to the user buffer. The indicating of how many of the user buffers are accepted is decoupled from issuing a notification that payload data is uploaded to a user buffer. As shown in Figure 8D, the payload is uploaded in step 886 and notification(s) are issued in step 890. No combination of the cited references teaches or suggests the limitation of indicating how many of the user buffers are accepted by an offload unit before the processed frame data is stored in a user buffer.

Hayes fails to teach or suggest that user buffers descriptors are received or that the number of user buffers accepted for delegated connections is indicated.

Connery teaches that a single user buffer location is provided to an offload unit. Nowhere does Connery teach or suggest that the offload unit receives a user buffer descriptor that specifies locations of user buffers for the connection or that the offload unit indicates the number of user buffers that are accepted, as recited in amended claims 1, 9, and 16.

The Examiner relies on Allison for teaching the limitation of indicating how many user buffers are accepted. However, Allison teaches a buffer count field that indicates the number of buffers that the data is stored in (see col. 5, lines 50-52). Since claims 1, 9, and 16 make clear that the indication of the number of “accepted” user buffers occurs before the data is stored in one of the user buffers, the buffer count field mechanism described by Allison cannot be functionally equivalent to the claimed indication of the number of user buffers that are accepted by the offload unit.

As the foregoing illustrates, no combination of Hayes, Connery, and Allison teaches or suggests each and every limitation of amended claims 1, 9, and 16. Therefore, amended claims 1, 9, and 16, and claims 2, 4-5, 8, 11-12, 15, 19-20, and 26-33, dependent thereon, are patentable over any combination of Hayes, Connery, and Allison.

In addition, claim 11 recites the limitation of notifying a TCP stack when a threshold value specified for frames transmitted from the offload unit over the delegated connection is exceeded. Claims 27 and 30 each recite the limitations of determining that a threshold value specified for frames transmitted from the offload unit on the delegated TCP connection is exceeded and setting a flag in a notification field indicating that the threshold value is exceeded.

Hayes, Connery, and Allison are completely silent regarding any type of threshold value.

The Examiner relies on Dunlap for teaching setting an “interrupt now” flag when a queue level threshold is exceeded (see col. 7, lines 17-23). The mechanism of Dunlap is used to prevent overflow of the queue that receives incoming traffic. In contrast, the threshold recited in amended claims 11, 27, and 30 is specified for frames that are transmitted from the offload unit. Thus, like Hayes, Connery, and Allison, Dunlap fails to

teach or suggest the limitations of a threshold value that is specified for frames transmitted from the offload unit, as recited in amended claims 11, 27, and 30.

For the foregoing reasons, amended claims 11, 27, and 30 are in condition for allowance independent of their dependency on the allowable independent claims.

Claims 26, 28, and 29 each recite the limitation of a sync request flag that controls flushing of existing user buffer descriptors and discarding of new user buffer descriptors for the delegated TCP connection. Hayes, Connery, Allison, and Dunlap are completely silent regarding a flag that controls flushing of existing user buffer descriptors and discarding of new user buffer descriptors. However, the Examiner takes Official Notice that it would have been obvious to one of ordinary skill in the art at the time of the invention to include a sync request flag to ensure the database of buffers in use remains consistent between the main and offload units. The Official Notice is traversed.

While the flag is a “sync” flag, the operations that the flag controls are not performed to “synchronize” the database of buffers. Unlike the Unix sync function, the flag recited in claims 26, 28, and 29 controls the flushing of existing user buffer descriptors and discarding of new user buffer descriptors. The flushing and discarding makes the user buffers unavailable to the offload unit for uploading of data. However, the user buffers remain available in the system memory. Likewise, the recited limitations of flushing and discarding the user buffer descriptors are not performed to “synchronize” copies of a database used by Microsoft Outlook, Windows Media Player, or an iPod. Thus there is no technical justification for the Official Notice, and Applicants contend that the Examiner has improperly relied on such Notice.

For the foregoing reasons, claims 26, 28, and 29 are in condition for allowance independent of their dependency on the allowable independent claims.

New Claims

New claims 31-33 depend from allowable amended claims 1, 9, and 16, respectively. New claims 31-33 each recite the limitation of issuing a notification command after the first processed frame data is uploaded to the user buffer, as supported by paragraphs [0062] and [00115] and Figure 8D of the application, as originally filed. These new claims further clarify that the indicating of how many of the

user buffers are accepted is decoupled from issuing a notification that payload data is uploaded to a user buffer. As previously explained, none of the cited references teaches or suggests indicating how many of the user buffers are accepted before payload data is uploaded to a user buffer. These new claims are therefore patentable over any combination of the cited references.

CONCLUSION

In conclusion, the references cited by the Examiner, alone or in combination, do not teach, show, or suggest the invention as claimed. Having addressed all issues set out in the office action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request that the claims be allowed. If the Examiner has any questions, please contact the Applicants' undersigned representative at the number provided below.

Respectfully submitted,



Stephanie Winner
Registration No. 52,371
PATTERSON & SHERIDAN, L.L.P.
3040 Post Oak Blvd. Suite 1500
Houston, TX 77056
Telephone: (713) 623-4844
Facsimile: (713) 623-4846
Agent for Applicant(s)